

STAFFING / RECORD KEEPING

A register or log should be used to record the results of every test performed at a swimming pool, spa pool or pool complex. There are a wide variety of test register sheet designs that vary according to the type of pool and disinfectants used. There is no ideal test register sheet. Each pool or pool complex should design its own test register sheet according to local needs and recognizing the requirements of Section 6.4.

A daily register sheet is essential which includes the testing times of each pool each day and cells for data entry of:

- date and time,
- disinfectant concentrations (and ORP),
- pH,
- total alkalinity,
- temperature, and
- bathing loads.

Other entries that may be made include:

- backwashing,
- total dissolved solids,
- chlorine bottle usage,
- cyanuric acid concentration,
- water meter reading,
- electricity meter readings,
- admission data,
- dose settings,
- mechanical maintenance items,
- chemical stocks on hand,
- weather,
- water balancing, and
- general remarks.

One person should be made solely responsible for pool testing and recording of results each working shift and the register sheet should bear their name.

Operator Qualifications

A pool operator is the person nominated to be in charge of the pool and this should be a person dedicated on site specifically to control the pool or recreational center operations. Operators of public pools should have a sound knowledge of pool operating procedures.

Pool operators should have a sound knowledge of:

- pool plant,
- pool maintenance,
- pool disinfection requirements,
- water testing,
- first aid, and
- life saving and resuscitation techniques.

Water Balancing

Pool professionals place great importance on water balancing. The term "chemical water balance" means that the swimming pool water is in a state of equilibrium with calcium compounds. Balanced water prolongs the life of a pool and its fittings, assists with preventing stains and improves bather comfort. If pool water does not have enough dissolved salts it will try to obtain them by etching or eroding the pool surfaces and fittings. If the pool water has too much dissolved salts it will try to get rid of the excess in the form of salt precipitates or deposits known as scaling.

The three major factors, which operate interdependently affecting water balance, are pH, total alkalinity and calcium hardness. As pH rises, salt solubility decreases and therefore, in hard waters with a high alkalinity, scaling may occur. As total alkalinity rises, again the solubility of salts tends to decrease and again in hard water with a high pH, scaling may occur.

Calcium hardness is a measure of all the different dissolved calcium compounds found in the pool. If calcium hardness is low it does not cause problems in a pool unless the water is not chemically balanced. If calcium hardness is too high it again may not cause problems unless the water is not chemically balanced.

Temperature affects the solubility of salts in a pool. Generally a salt is less soluble in water at higher temperatures (boilers and heat exchangers) than at lower temperatures.

See <http://www.dhss.mo.gov/RecreationalWater/PoolsSpas.htm> and hyperlink to the SWIMMING POOL WATER CHEMISTRY guide for detailed discussions.

Total Dissolved Solids

Total dissolved solids (TDS) is a measure of all soluble matter dissolved in pool water. Mains water often has a TDS of several hundred mg/L. All chemicals added to a pool, particularly chlorides and sulphates, increase the TDS level and a high level is an indication of chemical overload or lack of dilution of pool water.

The TDS of the pool should be regularly compared to that of the mains water. As a general rule TDS should not rise greater than 1,000 mg/L above the mains water and should not be permitted to rise to an absolute of 3,000 mg/L. TDS is lowered by regularly dumping of water and adding fresh water.